

Claim Listing:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. **(currently amended)** A brake rotor comprising:
 - a first and a second annular braking surfaces jointly defining inner and outer circumferential surfaces and a central portion;
 - a first surface slot provided on the first annular braking surface having a length and a width; and
 - a first opening having a size smaller than the length of the first surface slot, wherein all or a portion of the first opening being provided within the first slot
2. (original) The rotor according to claim 1, further comprising a hat portion disposed in the central portion and adapted for mounting the rotor to a vehicle;
3. (original) The rotor according to claim 1, wherein the first opening allows the first annular surface to fluid communicate with a vent.
4. **(currently amended)** The brake rotor according to claim 1, wherein the first opening includes a width or radius equal to or smaller than the width of the first surface slot ~~corresponds in size to the first slot.~~
5. **Cancel.**
6. (original) The brake rotor according to claim 1, wherein the vent is provided proximate a periphery of the brake rotor.
7. **(currently amended)** The brake rotor according to claim 1, wherein the vent is provided proximate ~~to a~~ the central portion of the brake rotor.
8. (original) The brake rotor according to claim 1, wherein the first opening fluid

- communicates with the vent via a flow channel.
9. (original) The brake rotor according to claim 8, wherein the flow channel is provided between the inner and outer circumferential surfaces.
 10. (original) The brake rotor according to claim 9, wherein the flow channel is defined by a pair of vanes provided between the inner and outer circumferential surfaces.
 11. (original) The brake rotor according to claim 1, further comprising a plurality of vanes provided between the inner and outer circumferential surfaces, wherein at least a pair of vanes defines a flow channel having a first flow channel opening provided near the central region and a second flow channel opening provided near a periphery of the brake rotor, wherein the first opening fluid communicates with the vent via the flow channel.
 12. **(currently amended)** The brake rotor according to claim 1, further comprising a second surface slot provided for on the second annular surface having a length and a width and a second opening having a size smaller than the length of the first surface slot, wherein all or a portion of the second opening being provided within the second slot and wherein the second opening fluid communicates with the first opening and/or the vent.
 13. **(currently amended)** The brake rotor according to claim 12, wherein the second opening includes a width or radius equal to or smaller than the width of the second surface slot ~~corresponds in size to the second slot~~.
 14. **Cancel.**
 15. (original) The brake rotor according to claim 12, wherein the second slot corresponds in size and position to a size and position of the first slot.
 16. (original) The brake rotor according to claim 1, further comprising a plurality of the first slots each having at least one first opening in communication with a vent.
 17. (original) The brake rotor according to claim 16, further comprising a plurality of the second slots each having at least one second opening in communication with a vent.

18. (original) The brake rotor according to claim 17, wherein each second slot corresponds in size and position to a corresponding first slot.
19. (original) The brake rotor according to claim 18, wherein each second opening of each second slot corresponds in size and position to a corresponding first opening of a corresponding first slot.
20. (original) The brake rotor according to claim 1, wherein all or a portion of the first slot is substantially straight.
21. (original) The brake rotor according to claim 1, wherein the first slot includes a curve.
22. **(currently amended)** A brake rotor comprising:
 - a first and second annular braking surfaces jointly defining inner and outer circumferential surfaces and a central portion;
 - a first surface slot provided on the first annular braking surface having a length and a width;
 - a first opening having a size smaller than the length of the first slot, wherein all or a portion of which being provided within the first slot; and
 - a second opening, in fluid communication with the first opening and the second annular braking surface.
23. (original) The brake rotor according to claim 22, further comprising a hat portion disposed in the central portion and adapted for mounting said rotor to a vehicle;
24. **(currently amended)** The brake rotor according to claim 22, wherein the first opening includes a width or radius equal to or smaller than the width of ~~corresponds in size to~~ the first slot.
25. **Cancel.**

26. **(currently amended)** The brake rotor according to claim 22, wherein the second opening ~~includes a width or radius equal to or smaller than a width of a second surface slot provided on the second annular braking surface and a length smaller in size than a length of the second surface slot, wherein all or a portion of the second opening which~~ being provided within ~~the a second surface slot provided on the second annular braking surface.~~
27. **Cancel.**
28. **Cancel.**
29. **(currently amended)** The brake rotor according to claim 26, wherein the second opening and the second ~~surface~~ slot each respectively correspond to the first opening and the ~~first second surface~~ slot.
30. (original) The brake rotor according to claim 22, wherein the first opening and the second opening include substantially similar sizes.
31. (original) The brake rotor according to claim 22, further comprising a plurality of vanes provided between the inner and outer circumferential surfaces, wherein at least one pair of vanes of the plurality of vanes defines a flow channel having a first flow channel opening provided near the central region and a second flow channel opening provided near a periphery of the brake rotor.
32. (original) The brake rotor according to claim 31, wherein the first opening is in fluid communication with the flow channel.
33. (original) The brake rotor according to claim 31, wherein the second opening is in fluid communication with the flow channel.
34. (original) The brake rotor according to claim 31, wherein the first opening and the second opening are in fluid communication with the flow channel.
35. **(currently amended)** The brake rotor according to claim 22, further comprising a

- plurality of the first surface slots, each provided on the first annular surface, wherein each first surface slot includes at least one first opening.
36. **(currently amended)** The brake rotor according to claim 22, further comprising a plurality of second surface slots corresponding to each of the first surface slots, wherein each second surface slot is provided on the second annular surface and wherein each second surface slot includes at least one second opening corresponding to a respective first opening.
37. **(currently amended)** A surface slot for a braking surface for a braking device comprising:
- ~~an elongated slot groove having a length and a width at least one of a diameter, a depth, a width and a length; and~~
- at least one first opening having a size smaller than the length of the groove, wherein all or a portion of the first opening is provided within the surface slot.
38. The slot according to claim 37, wherein the first opening is in fluid communication with a vent of the braking device.
39. **Cancel.**
40. **Cancel.**
41. **(currently amended)** A method of communicating gases and/or material from a braking surface of a braking device comprising:
- providing at least one first surface slot in the braking surface having a length and a width, wherein the slot includes at least one first opening having a size smaller than the length of the first surface slot, wherein all or a portion of the first opening is provided within the slot and wherein the opening is in fluid communication with a vent; and

communicating gases and/or material from the first braking surface as a result of friction between a braking pad and the first braking surface to the vent via the first opening.

42. **Cancel.**

43. **Cancel.**

44. **(currently amended)** The method according to claim 41, further comprising providing a corresponding second surface slot for each of the at least one first surface slots, wherein

the corresponding second surface slot is provided on a second braking surface of the braking device and includes a second opening having a size smaller than a length of the second surface slot;

all or a portion of the second opening is provided within the second surface slot;
and

the second opening is in fluid communication with the first opening.

45. **Cancel.**

46. **Cancel.**

47. **(currently amended)** A method of communicating gases and/or material from a braking surface of a brake rotor comprising:

providing:

at least one first surface slot having a length and a width and having at least one first opening on a first annular braking surface of a brake rotor, wherein the first opening includes a size smaller than the length of the first surface slot and wherein all or a portion of the first opening is provided within the slot; and

a corresponding second surface slot for each of the at least one first surface slots, wherein the corresponding second surface slot is provided on a second annular braking surface of the brake rotor and includes a second opening, wherein the second opening includes a size smaller than a length of the second surface slot and wherein all or a portion of the second opening is provided within the second slot and wherein the second opening is in fluid communication with the first opening;

and

communicating gases and/or material from the first annular braking surface produced as a result of friction between a first braking pad and the first annular braking surface toward the second slot via the first opening.

48. **Cancel.**

49. **Cancel.**

50. **(currently amended)** A brake rotor comprising:

a first and second annular braking surfaces jointly defining inner and outer circumferential surfaces and a central portion;

a hat portion disposed in the central portion and adapted for mounting said rotor to a vehicle;

a plurality of vanes provided between the inner and outer circumferential surfaces, wherein a plurality of corresponding flow channels are defined between at least a pair of vanes of the plurality of vanes, and wherein each flow channel includes a first flow channel opening provided near the central region and a second flow channel opening provided near a periphery of the brake rotor;

a plurality of first surface slots provided on the first annular braking surface, each having a length and a width;

a plurality of second surface slots provided on the second annular braking surface, each having a length and a width corresponding to a respective first slot of the plurality of first slots;

at least one first opening provided within at least one of the first surface slots and having a size smaller than the length of the corresponding first surface slot, and all or a portion of a respective first opening ~~which~~ being provided within a corresponding ~~each~~ first surface slot; and

at least one second opening provided within at least one of the second surface slots and having a size smaller than the length of the corresponding second surface slot, and all or a portion of a respective second opening ~~which~~ being provided within a corresponding ~~each~~ second surface slot, wherein each second opening of each second slot corresponds substantially to and fluid communicates with a first opening of a first slot.

51. **Cancel.**

52. **Cancel.**

53. **(currently amended)** A vehicle having a disc brake system including one or more disc brake rotors, each comprising:

a first and a second annular braking surfaces jointly defining inner and outer circumferential surfaces and a central portion;

a first surface slot provided on the first annular braking surface having a length and a width; and

a first opening having a size smaller than the length of the first surface slot, wherein all or a portion of the first opening being provided within the first slot.

54. **(currently amended)** A vehicle having a disc brake system including one or more disc brake rotors, each comprising:

a first and second annular braking surfaces jointly defining inner and outer circumferential surfaces and a central portion;

a first surface slot provided on the first annular braking surface having a length and a width;

a first opening having a size smaller than the length of the first surface slot, wherein all or a portion of which being provided within the first surface slot; and

a second opening, in fluid communication with the first opening and the second annular braking surface.

55. **(currently amended)** A vehicle having a disc brake system including one or more disc brake rotors, each comprising:

a first and second annular braking surfaces jointly defining inner and outer circumferential surfaces and a central portion;

a hat portion disposed in the central portion and adapted for mounting said rotor to a vehicle;

a plurality of vanes provided between the inner and outer circumferential surfaces, wherein a plurality of corresponding flow channels are defined between at least a pair of vanes of the plurality of vanes, and wherein each flow channel includes a first flow channel opening provided near the central region and a second flow channel opening provided near a periphery of the brake rotor;

a plurality of first surface slots each having a length and a width and being provided on the first annular braking surface;

a plurality of second surface slots each having a length and a width and being provided on the second annular braking surface corresponding to the plurality of first slots;

at least one first opening having a size smaller than the length of the first surface slot, wherein all or a portion of which being provided within each first surface slot; and

at least one second opening having a size smaller than the length of the second surface slot, wherein all or a portion of which being provided within each second surface slot, wherein each second opening of each second slot corresponds substantially to and fluid communicates with a first opening of a first slot.